REMARKS/ARGUMENTS

Favorable reconsideration of the present application is respectfully requested.

Claim 8 has been amended to recite a cover for covering each hole in the bed, and that the cover substantially prevents the passage of air. Basis for this is found in Figs. 8-9, and in the last sentence of page 24 in the specification which describes that the cover completely covers the cast hole to prevent leakage of air from, and the entry of air into, the interior of the bed. Claim 9 has been rewritten in independent form.

According to a feature of the invention set forth in Claim 1, a machine tool includes a "B-axis" turning unit for turning a tool about a B-axis which is parallel to the Y-axis, wherein the machining point of the tool substantially coincides with the B-axis. For example, Figure 2C illustrates that the machining point B of the tool T coincides with the B-axis. This has the advantage that errors in the angular position of the B-axis turntable do not cause deviations in the machining point of the tool (see paragraph bridging pages 17-18).

Claims 1 and 2 were rejected under 35 U.S.C. § 103 as being obvious over U.S. patent publication 2005/0056125 (Trumper). According to this rejection, Figures 4 and 7 (and paragraph [0074]) of Trumper disclose that the machining point of the cutting tool coincides with the axis of rotation 46 of the turning unit. However, Applicants respectfully submit that this is incorrect since Figure 5 of Trumper clearly illustrates that the machining point of the cutting tool 90 is offset from the axis of rotation 46.

Trumper discloses a machine tool having a linear fast tool servo. A cutting tool 90 (also numbered 44) is mounted on a rotatable swing arm assembly 42 which rotates on a vertical axis 46. A workpiece 50 is held by a workpiece holder 51 attached to a lathe spindle so that the workpiece can be machined by the tool 90.

However, the cutting tool 90 is offset from the axis of rotation 46 of the swing arm assembly 42 by an offset radius 142 (paragraph [0080]). Thus, the tool of Trumper is not "disposed in such a manner that a machining point of the tool substantially coincides with the B-axis," i.e., an axis of the turning unit 42. Therefore, Trumper not only fails to teach a tool Y-axis moving unit in combination with a machine tool, as has been recognized in the Office Action. Trumper also fails to teach or suggest that the machining point of the tool substantially coincides with the B-axis, and so the claims clearly define over this reference.

Dependent Claims 3 and 4 were rejected under 35 U.S.C. § 103 as being obvious over Trumper in view of U.S. patent 4,833,764 (Muller), which was cited to teach a workpiece rotating drive disposed on a Z-axis moving unit. The Examiner there asserted that the C-axis of Muller is equivalent to the B-axis of the claims. As is clearly evident from Figure 1 of Muller, however, none of the machining points of the tools 56 of Muller substantially coincides with the C-axis thereof. Muller therefore could not suggest modifying Trumper according to the subject matter of the claims.

Claim 5 was rejected under 35 U.S.C. § 103 as being obvious over Trumper and Muller, and further in view of U.S. patent 3,837,245 (Schuler et al) which was cited to teach a cast iron base block having internal portions and filled with a core material. Nonetheless, Schuler et al provides no teaching to suggest modifying Trumper such that the machining point of the tool thereof substantially coincides with the B-axis.

Claim 8 is directed to a feature of the invention whereby a bed structure for the machine tool has a hollow structure and at least one cast hole, wherein a cover is provided for covering the cast hole in order to close the interior of the bed and substantially prevent the passage of air. For example, referring to the non-limiting embodiment of Figure 9, the cover 103 includes a seal ring 105 to prevent the passage of air into and out of the bed. The bed structure is therefore less susceptible to temperature fluctuations, which improves the machining accuracy.

Claim 8 was rejected under 35 U.S.C. § 102 as being anticipated by U.S. patent 2,725,775 (Leifer). Leifer discloses a lathe having a base 7 which houses a motor 10. As the Examiner has noted, the base has an opening 19 covered by a cover plate 18. However, the base also has an opening covered by a filter 23 which opening permits cooling air to pass into the base (column 2, lines 28-38). Since Claim 8 now recites that the cover for each hole in the hollow structure of the bed closes the interior of the bed and substantially prevents the passage of air, amended Claim 8 is believed to clearly define over this reference.

Applicants therefore believe that the present application is in a condition for allowance and respectfully solicit an early Notice of Allowability.

Respectfully submitted,

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